

INOVIO PHARMACEUTICALS, INC.  
Form 424B2  
November 16, 2010

Filed pursuant to Rule 424(b)(2)  
Registration Statement No. 333-160123

**PROSPECTUS SUPPLEMENT**

(to prospectus supplement dated September 7, 2010 and prospectus dated June 19, 2009)

## 506,800 Shares

### Common Stock

Pursuant to our Equity Distribution Agreement, dated August 27, 2010, with Roth Capital Partner, LLC, or Roth, during the period from September 7, 2010 through September 30, 2010, we have sold through Roth an aggregate of 506,800 shares through ordinary brokers transactions on the NYSE Amex for an aggregate sales price of \$565,650. The Equity Distribution Agreement has been filed as an exhibit to a current report on Form 8-K filed with the Securities and Exchange Commission on August 27, 2010 and is incorporated by reference herein. At September 30, 2010, we could sell from time to time through Roth up to an additional \$24,434,350 under the Equity Distribution Agreement. In connection with these sales, we paid commissions to Roth as follows:

|                                     |            |
|-------------------------------------|------------|
| Gross proceeds to us                | \$ 565,650 |
| Commissions                         | 17,029     |
| Net proceeds to us, before expenses | \$ 548,621 |

This prospectus supplement adds to, updates and changes information in, and should be read in conjunction with, the prospectus, dated June 19, 2009, and the prospectus supplement, dated September 7, 2010.

Our common stock is listed on the NYSE Amex under the symbol INO. On November 15, 2010, the last reported sales price of our common stock on the NYSE Amex was \$1.26 per share.

**Investing in our common stock involves a high degree of risk. See Risk Factors beginning on page S-3 of the prospectus supplement dated September 7, 2010 and the risk factors contained in our filings with the Securities and Exchange Commission, or SEC, which have been incorporated herein.**

**Neither the Securities and Exchange Commission nor any state securities commission has approved or disapproved of these securities or passed upon the adequacy or accuracy of this prospectus supplement or the accompanying prospectus. Any representation to the contrary is a criminal offense.**

**Roth Capital Partners**

The date of this prospectus supplement is November 16, 2010.